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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,979	07/03/2006	Edwin Gerard Ijpeij	4662146	2600

23117 7590 08/24/2007
NIXON & VANDERHYE, PC
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ARLINGTON, VA 22203

EXAMINER

LU, C CAIXIA

ART UNIT	PAPER NUMBER
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1713

MAIL DATE	DELIVERY MODE
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08/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/566,979

Applicant(s)

IJPEIJ ET AL.

Examiner

Caixia Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) 13, 14 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 12, 15, 16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant has elected without traverse of tri-tert-butyl-aminophoniumchloride as the ligand species and triethylamine as the base species in the reply filed on March 23, 2007, however, the elected base of triethylamine is not disclosed in the specification. Therefore, the examiner has elected metal-organic base of claim 15 in order to start the prosecution. Because the metal-organic agent of Formula 2, imine ligand of Formula 1 and organolithium are all soluble in organic solvents, the reaction among the three component must be conducted in an aprotic solvent, therefore, the reaction is not conducted in a phase transfer reaction process and claim 17 is restricted. Currently, claims 11-12, 15-16 and 18-20 are under examination.

Claim Objections

2. Claims 13 and are objected to because of the following informalities: in claim 13, (i) line 2, a connector between terms "an amide" and "a carbonate" is missing; and the term "ammonium salt" should be replaced with "ammonium"; (ii) in line 5, the compound "alkylammonium hydroxide" does not contain a metal and can not be a "metal-organic base". The objection is precluded to expedite the prosecution. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claims 11-12, 15-16 and 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 11, the limitation of the process for the preparation of a metal-organic compound "comprising at least one imine ligand according formula 1" does not make logical sense in that the process should be defined by steps rather than components such as the imine ligand. This is rejection is similar to the rejection of canceled claim 1 as shown in the previous Office Action.

In claim 12, (a) the format of the selective groups for group "Y" and group "R^{1j}" are improper because Markush terminology requires the phrase "selected from the group consisting of" and the connector "and" between the last two members. See MPEP 2173.05 (h); and (b) the numbering system of "Y" is improper, e.g., in line 9, the term "or" should be replaced with "(ii)", in line 11, the term "or" should be replaced with "(iii)", and in line 16, "(ii)" should be replaced with "(iv)".

Claim Rejections - 35 USC § 103

4. Claims 11-12, 15-16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over von Haken Spence et al. (US 6,355,744) in view of Gao et al. (CA 2,261,518) and Nielsen et al. (US 2004/0010142) for the same rationale as set forth in the previous Office Action mailed April 21, 2007.

Response to Arguments

5. Applicants' arguments filed June 20, 2007 have been fully considered but they are not persuasive.

Applicants argue that Haken's process is not suitable for CpTiCl₃ due to the formation unstable CpTiBuCl₂ etc.. First of all, applicants are reminded that the metal-organic reagent of Formula 2 is not limited to CpTiCl₃. The metal-organic reagent

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actually include metallocenes such as CpTiBu_3 , and CpTiBu_3 are expected to react with the imine ligand compound in the presence of the base to form a imine ligand containing metallocene complex. Secondly, organolithium such as methyl lithium are exemplified in the specification in line 5 of page 8, since methyl lithium and butyl lithium are homologous, one would have expected that applicants' methyl lithium to have function as a base in the similar fashion as Haken's butyl lithium. If butyl lithium does not work, methyl lithium does not work either, i.e., applicants admit that the claims invention is not enabled. Thirdly, the experiments disclosed in the Attachment is not analogous to the reaction among CpTiCl_3 , BuLi and imine ligand compound, thus, they are not relevant to the rejection of the record. Fourthly, the bases of the instant claims are not limited to K_2CO_3 only, furthermore, K_2CO_3 as the base is not yet examined due to the restriction requirements.

In view of the foregoing, the rejection under 35 U.S.C. 103(a) is still deemed to be proper and thus maintained.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (571) 272-1106. The examiner can normally be reached from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful and the matter is urgent, the examiner's supervisor, David Wu, can be reached at (571) 272-1114. The fax numbers for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.

A handwritten signature in black ink, appearing to read 'Caixia Lu', is positioned above the printed name and title.

Caixia Lu, Ph. D.
Primary Examiner